

Modern Contraception Use in Ethiopia: Does Involving Husbands Make a Difference?

ABSTRACT

Objectives. This study was undertaken to determine the relative efficacy of home visitation with and without husband participation on the use of modern contraception in Ethiopia.

Methods. A randomized field trial of a family planning education intervention using home visitation with and without husband participation was conducted in Addis Ababa, Ethiopia, from August 1990 to December 1991 and included a 12-month postintervention follow-up. A total of 266 experimental and 261 control subjects were entered, of whom 91.7% and 88.9%, respectively, were followed through 12 months.

Results. A greater proportion of couples in the experimental group were practicing modern contraception at 2 months (25% vs 15%) and 12 months (33% vs 17%) following the home visit intervention. By 12 months following the home visits, experimental subjects were less likely to have defaulted and more likely to have started using modern contraception following an initial delay.

Conclusions. The inclusion of husbands in family planning programs will result in relevant increases in the use of modern contraception. However, there exists an important "sleeping" effect to the education intervention, reflected by a delay of greater than 2 months in the initiation of modern contraception for most couples. (*Am J Public Health*. 1993; 83:1567-1571)

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Introduction

Rapid population growth, which in many instances far outstrips economic growth and environmental sustainability, is the reality in most developing countries of sub-Saharan Africa.¹⁻³ Within this region, annual population growth rates over the past 2 decades have continued to increase, and the contraception prevalence rate has remained under 10%.^{1,2}

In Ethiopia the overall contraception prevalence rate among women of childbearing age (15 to 49 years) is less than 2%, and the crude birth rate is estimated to be 49 per 1000 population.¹ Most women in Ethiopia marry by the age of 15, and less than 6% remain single by the age of 24.⁴ On average, Ethiopian wives experience seven pregnancies during their lifetime, each pregnancy carrying about a 1% risk of death.^{1,3,5,6} These figures are associated with an annual rate of population growth of approximately 3%.^{1,2} Applying the lower end of national fertility projections, the current Ethiopian population of 50 million is expected to reach 90 million by 2010 and 165 million by 2035.

The aim of the program was to initiate and sustain modern contraceptive use among married couples. Because the limited research on male roles in Ethiopia and sub-Saharan Africa has consistently found that decisions regarding family size and contraception are dominated by husbands, who expect to have large families,⁷⁻¹² this field trial was undertaken to determine what effect involving husbands in a community-based, home visitation, health education program would have on the use of modern contraception in Ethiopia.

Methods

Study Design

This was an experimental, randomized field trial comparing the relative ef-

fectiveness of a modern contraception educational intervention program in Ethiopia with and without husband participation. The general architecture of the study and enrollment are found in Figure 1. The interventions were carried out between August 1990 and January 1991, and modern contraceptive use was verified at 2 and 12 months following intervention.

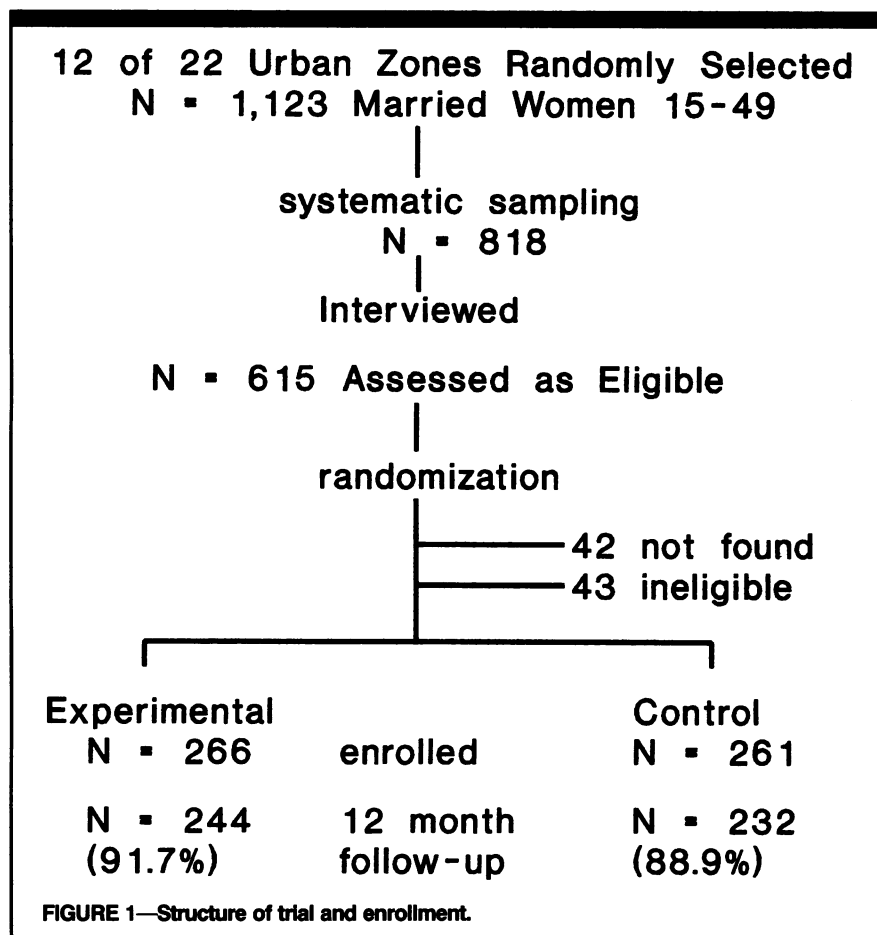
The study was conducted in the semi-urban, peripheral Kotebe District, one of 18 districts in Addis Ababa. Kotebe is located at about 12 kilometers northeast of the city center. Approximately 80% of its population of 43 000 is urban. The source population for the field trial was any urban Kotebe female resident between the ages of 15 and 49 years who was married and living with her husband. It was estimated that there were approximately 1214 women eligible for this study residing within the 12 randomly selected zones. Excluded from eligibility were women currently using modern contraception, pregnant women, and women with a chronic physical or mental illness. Prior to this study, no family planning outreach program was or had been in existence.

Local, trained traditional birth attendants who were currently working in the district and had, on average, more than 10 years experience in the community were paired with a female interviewer having a 12th-grade education. The pairs were pro-

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vided with the names of married women of childbearing age who resided in their respective zones and were systematically selected on a 2:1 basis from a census list. The birth attendants identified these women, confirmed their eligibility for enrollment (203 of 818 were excluded), and arranged a date and time for a home visit. The interviewer completed a baseline questionnaire, which in all instances, was conducted with the wife only. The interviewers were unaware of the research objectives and group assignments. Following completion of the questionnaire, one of the principal investigators (AT) collected blocks of eight names and assigned them as control or experimental subjects based on random assignment schedules for each home visitor. At the time of the follow-up home visit, a further 88 subjects were excluded: 42 had moved or could not be found, 43 were ineligible (24 were pregnant, 13 postmenopausal, 6 on contraception), and 3 had husbands who refused the visit. The final enrollment figures were 261 control and 266 experimental subjects. There was no loss of subjects at the 2-month follow-up, but 29 control (11.1%) and 22 experimental (8.3%) subjects were lost to follow-up after 12 months.

Intervention

Eight female health assistants, accompanied by the traditional birth attendants involved in the initial contact, conducted the home visits. These health assistants were employed at the local district health station and were known to the community. They worked on this project in the early evenings and on weekends, which facilitated scheduling the husbands in the experimental group. The health assistants were trained to maintain an informal atmosphere and to permit spontaneous communication.

After briefly explaining the purpose of the study, the health assistants requested the consent of the participants. Next, they provided health education on family planning and modern contraceptive methods to either the wife alone (control group) or the wife and husband (experimental group). (The eight health assistants had an almost equal number of control and experimental subjects.) The sessions generally started with a discussion of the health of the family, which is a culturally acceptable manner in which to initiate a conversation. Questions on the woman's reproductive history were then used as the entry point into the actual family planning

education. The content of the education focused on the advantages of family planning as a means of preventing unwanted pregnancy and birth, of spacing births, and of controlling family size. Health assistants discussed the advantages of birth spacing for the mother, children, and family with respect to both promotive and preventive aspects of health. Additionally they stressed the ill effects of a large family on all family members and on the nation as a whole. This was followed by an explanation of alternative contraceptive methods—the birth control pill, the intrauterine device (IUD), and the condom—and a discussion of the relative efficacy of modern contraception versus traditional methods.

A maximum of two visits were made. Couples intending to initiate modern contraception were allowed their choice of method and provided with the appropriate explanations and information about follow-up. The contraceptive method was provided at the conclusion of the home visit, if requested. This included either two cycles of birth control pills, two dozen condoms, or a copper-T IUD set to be brought to the local health center for insertion.

The hypothesis to be tested was as follows: those couples in which husband and wife receive family planning education in the home will have a significantly higher rate of modern contraceptive use at 2 and 12 months following the intervention than those couples in which the wife alone receives such education ($P < .05$, two-sided).

Measurement

Baseline sociodemographic and reproductive histories as well as knowledge about and attitudes toward modern contraception were obtained prior to randomized assignment and a home visit. Initiation of contraception was recorded as yes on the basis of stated intent following the home visit. At 2 and 12 months, the use of modern contraception was verified on the basis of current birth control pill use and refills, condom refills, or proof of IUD insertion. In all instances, this information was obtained from the wife.

Analysis

All questionnaires were checked by one of the principal investigators for accuracy, and the data were coded. Data were entered, edited, and analyzed using EPI-INFO version 5.01B (USD, Inc., Stone Mountain, Ga).

Results

Ninety-five percent of the study group were Orthodox Christians, and 85%

TABLE 1—Characteristics of Experimental and Control Subjects

	Experimental Group		Control Group	
	Mean (1SD)		Mean (1SD)	
Age, y				
Wife	30.8 (6.7)		31.5 (6.8)	
Husband	39.8 (8.2)		41.0 (8.9)	
Education, y				
Wife	5.2 (3.8)		5.2 (3.9)	
Husband	7.3 (4.1)		7.3 (4.4)	
Siblings, no.				
Wife*	5.0 (2.6)		5.6 (2.9)	
Husband	4.5 (2.8)		4.5 (2.8)	
Deliveries, no.	3.9 (2.4)		4.0 (2.5)	
Living children, no.				
Male	2.0 (1.5)		1.8 (1.4)	
Female	1.6 (1.3)		1.8 (1.6)	
Age of last child, mo	40.1 (47.8)		42.0 (51.6)	
Desired number of children	4.0 (1.2)		4.0 (1.7)	

* $P < .05$, t test.

of the women were housewives. The language of origin in two thirds of the participants was Amharic while that of the rest was mostly Oromigna. Two thirds of the husbands were government employees, which includes local factory workers. There were no between-group differences in these characteristics. Complete follow-up through 12 months was achieved in 91.7% of the experimental and 88.9% of the control subjects.

Table 1 summarizes the between-group comparison of demographic and reproductive histories. There were no significant differences between control and experimental subjects found at enrollment, except that control group women had a slightly higher number of siblings ($P < .05$). The level of education of 70% of the women was 6th grade or below, while 70% of the men had completed 5th grade or higher. Husbands in this study were also older than their wives. The number of women having one to two children, three to four children, and five or more children ranged between 25% and 30% for each category and was evenly and uniformly distributed across both groups. Only 6.6% of the women had no living children.

There were no significant group differences in family planning knowledge or attitudes. The majority of the women (65%) wished to have four children. Fif-

TABLE 2—Verification of Modern Contraception (MC) Use at 2- and 12-Months Follow-Up

	At 2 Months			At 12 Months		
	MC Use	No.	%	MC Use	No.	%
Experimental subjects (n = 244)	Yes	63	25.8	Yes	40	16.4
	No	181	74.2	No	23	9.4 ^a
Control subjects (n = 232)	Yes	39	16.8	Yes	40	16.4 ^b
	No	193	83.2	No	141	57.8
				Yes	13	5.6
				No	26	11.2 ^a
				Yes	27	11.6 ^b
				No	166	71.6

^aDefaulters.^bDelayed starters.

teen percent of the women had not heard of modern contraceptive methods while about 40% knew of only one such method: mainly the birth control pill. Husbands were generally supportive of the need for family planning (57% and 69% in control and experimental subjects, respectively).

Following the home visit intervention, 47.0% (n = 125) of the experimental versus 33.0% (n = 86) of the control women decided to start using modern contraception (relative risk [RR] = 1.42, 95% confidence interval [CI] = 1.15, 1.76). In more than 90% of cases, the birth control pill was chosen. At 2 months following the home visit intervention, it was confirmed that approximately one-half of all couples who had stated their intention to initiate modern contraception were not using it. The practice of contraception at 2 months was verified in only 24.7% (n = 66) experimental and 15.3% (n = 40) control subjects (RR = 1.61, 95% CI = 1.13, 2.30). This analysis was further stratified by the presence or absence of husband support for family planning. Relative risk estimates and 95% confidence intervals remained above 1 and favored the experimental subjects with and without husband support. No significant interaction was found (Woolf's χ^2 0.14, $P = .71$).

Table 2 summarizes the modern contraceptive practices of those subjects who were successfully followed through 12 months after home visitation. From these figures, one can subgroup subjects into those who practiced modern contraception throughout the year (yes at 2 and 12 months), those who defaulted by 12 months (yes at 2, no at 12 months), those who delayed starting (no at 2, yes at 12 months), and those who never used it (no at 2 and 12 months). Experimental subjects were less likely to have defaulted

from modern contraceptive use by 12 months (RR = 0.55, 95% CI = 0.37, 0.81) and more likely to have delayed starting it (RR = 1.58, 95% CI = 1.01, 2.46). At 12 months, twice as many experimental couples were using modern contraception as were control subjects (RR = 1.90, 95% CI = 1.36, 2.66). Overall, 25.2% of couples were using it at 12 months, and the majority of these (55.8%) initiated the practice 2 or more months after the home visit intervention.

Discussion

This randomized field trial of family planning education in the home with or without husband participation has demonstrated that, as hypothesized, providing a family planning educational intervention program in the home to the husband and wife significantly improves modern contraception use up to 12 months following the intervention. Usage as measured by early or late initiation, overall use at 12 months, and default rates was better in all instances among couples with husband participation than among those couples without husband participation. Given the favorable quality of the randomization, it is concluded that the differences can be attributed to husband involvement in the intervention program and have not been confounded by demographic, reproductive, or knowledge and attitude disparities between the two study groups.

Several investigators have found that Ethiopian and East African husbands expect to have large families and thus play a dominant role in a couple's decision to initiate modern contraception.⁷⁻¹² Given that most Ethiopian women will not initiate contraception without their husband's knowledge, a husband's disap-

proval can be expected to be a major deterrent to use. Unfortunately, favorable husband attitudes do not appear to be sufficient. For example, among the couples enrolled in this study, none of whom were practicing modern contraception at the outset, more than 60% of husbands supported the need for family planning. This high baseline level of husband support for family planning was unexpected and may explain the generally successful response to the two interventions. It may be that the husbands were providing the expected answer out of respect for the interviewer. Similar unpublished findings of high support but low practice have been found in the north-central Ethiopian district of Yifatna Timuga. While husbands may acknowledge the need for family planning, practice tends to be influenced by the high levels of misinformation regarding the side effects of modern contraception, particularly oral contraceptives.⁷ This includes fears of sterility, arthritis, loss of weight or strength, and skin changes.

Of particular interest is the finding that most of the women initiated modern contraceptive use more than 2 months following the intervention. This delayed or "sleeping" effect was first described 40 years ago by Hovland and Weiss,¹³ who attributed the delay in communication effect to the low credibility of the source of information. Over time, the inhibiting influence of the source diminishes and the message leads to change. It has been assumed, but unconfirmed, that health assistants and trained traditional birth attendants enjoy a relatively high status in Ethiopian communities; this may not be the case. Alternatively, the delays observed may be explained in terms of the time required to undergo a change in attitude and the degree of personal commitment required. Given that the use of modern contraception is contrary to past practices and familial expectations, the home visit may have shifted couples from a position of uncertainty or ambivalence to one of an acknowledged, positive desire to initiate modern contraception. Such a change in attitude and, subsequently, in actual practice is a process that, in a large subset of couples, may unfold over several weeks. The delays identified in this study suggest that family planning intervention programs should interpret early results cautiously.

Is the intervention package offered in this trial applicable to and realistic for other Ethiopian and sub-Saharan communities? To answer this question, three elements of the intervention require consid-

eration: home visitation, the visitor, and the educational content. Home visiting is a labor-intensive activity that requires competent organizational skills at the district level and reliable transportation facilities. A maximum of two visits—and in most cases, only one visit—was provided. Four to six women or couples were seen in a half-day schedule. The equivalent of one full-time health assistant can be expected to serve from 1500 to 2000 couples per year in an urban community. In a rural setting, these numbers would be reduced owing to travel time. The large majority of the couples visited were not regular health institution attenders and, in the absence of home visiting, were unlikely to have benefited from an institution-based program. Without a community outreach component such as home visitation, family planning services would miss the large majority of their target population.

In this study, husband participation was high. Although there were a few instances in which the husband refused to complete the health education session, the vast majority were tolerant and available as scheduled. Several factors may explain this high rate of husband compliance. First, the visits were carried out by health workers well known to the community. These workers shared a common cultural and social background with the couples they visited and were aware of how to approach husbands in an acceptable and appropriate manner. Second, the educational message was ordered to respond first of all to the couples' main concerns or perceived barriers to use. Third, at the time this intervention was carried out, the stability of the government was very much in question. Thus, for security reasons, people tended to return home and stay at home after working hours. This situation probably facilitated the task of scheduling husband participation.

The interventions were provided by health assistants and trained traditional birth attendants who were currently working in the district following a brief period of training. This level of health professional is found throughout Ethiopia and most of Africa. The content of the intervention was based on the educational outline described; as mentioned, however, this content was modified according to the couple's family planning knowledge and attitudes, with which the birth attendants and health assistants were familiar. Given appropriate supervision and integration into existing health services, the interventions provided are considered applicable

to any urban and probably most rural settings in Ethiopia.

At 12 months following the intervention, nearly one quarter of all subjects were using some form of modern contraception. In a district where the baseline contraception prevalence rate was 2%, the rise to 17%, even without husband involvement, is a strong endorsement of home visitation. With the inclusion of husbands, the program's impact on the use of modern contraception nearly doubled. If these results can be repeated in other settings, the benefits would seem to justify the personnel inputs. The training and supervision requirements are modest and applicable to districts where a health management system is in place and functional. Based on the study's findings, the development and evaluation of alternative models of home visitation and husband involvement that include evaluation of the intervention elements and costs in relation to its benefits is recommended.

This investigation does not take into account the interaction of multiple factors influencing the desire to have children—in particular, cultural factors that can vary widely between regions, districts, and even communities. Warwick¹⁴ and others have cautioned against grand conclusions based on single studies, and we concur. Involvement of husbands must be linked to local realities and responsive to the expressed desires of communities. The intervention described in this study was developed following extensive consultation with the community and the national family planning program. Furthermore, we used existing resources and housed the program within the local health institutions. This provides, at best, a broad framework upon which to design similar family planning programs that involve men in contraception and constructively expand their family planning responsibilities. □

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1994 National Committee for Clinical Laboratory Standards Annual Meeting

The theme of the 1994 National Committee for Clinical Laboratory Standards (NCCLS) annual meeting, "A View From the Bridge: Pressures on Laboratory Practice," takes a step back to observe clinical laboratory practice from different points of view. The meeting will be held at the San Diego Princess Resort, San Diego, Calif, March 24 through 26, 1994; it will provide an opportunity for constituencies from government, industry, and the professions to meet and discuss important issues affecting the clinical laboratory testing community.

A keynote address by a news media representative will open the meeting, with discussion on various media topics currently affecting clinical laboratory testing. This will be followed by a plenary session offering public relations, regulatory, and consumer points of view on the use and abuse of clinical laboratory news. The first two concurrent symposia will focus on domestic issues regarding requirements for technological progress and near-patient testing. The second set of symposia will tackle international cooperation on requirements for technological progress and noninvasive and minimally invasive testing.

Slated to close the meeting is a discussion on the future, specifically healthcare reform and how it will affect clinical laboratory testing, both operationally and economically. All sessions will be conducted in a roundtable format for ease of discussion, and an expanded poster session will be held.

The annual meeting education program will begin on Friday afternoon, March 25, and continue all day Saturday, March 26. The program will cover timely topics in clinical laboratory testing related to NCCLS standards and guidelines.

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